



Exceptional Events in AQS

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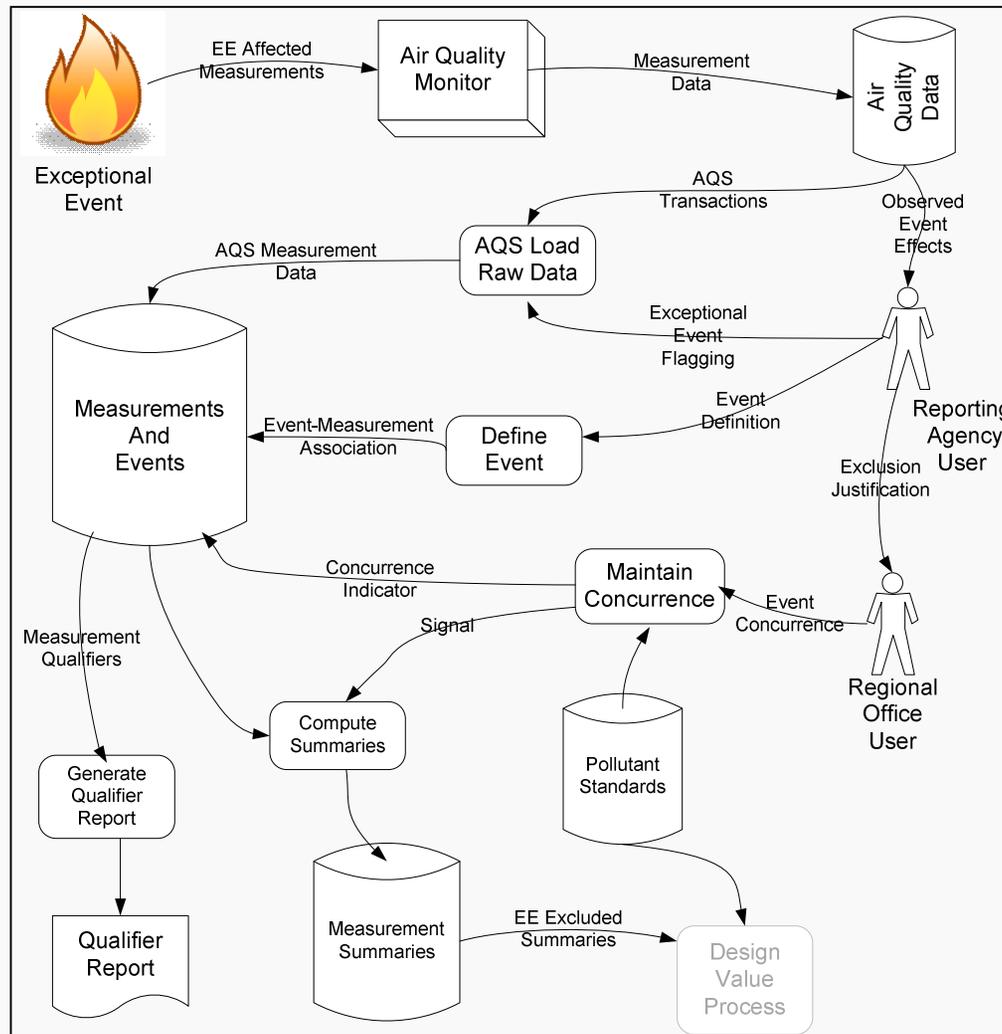


Overview of Exceptional Event Rule

- Took effect in 2007 and implemented in AQS in March 2010
- The EER:
 - Allows air quality data to be flagged and where appropriate, excluded from calculations in determining whether or not an area has attained the NAAQS standard.
 - Affects both submission and retrieval of data



EER Process





EER Process Critical Dates

- The EER regulations establish critical dates for the validity of an exclusion request. These are tracked by AQS:
 - Date that an Exceptional Event Qualifier is associated with the sample measurement.
 - Date that an Event is associated with the sample measurement.
- If a sample measurement is updated without changing the value or Exceptional Event Qualifier Code, then the above dates are preserved.



AQS-EER Business Processes

- Flag sample measurements
- Define Event
- Associate Event with flagged measurements
- Off-line: Submit justification to EPA
- EPA: Concur/Non-concur with exceptional event exclusion.
- Review flagged data status



Flag Sample Measurements

- No Change to prior processes
- Batch Mode:
 - Submit flags with data on Insert transactions
 - Submit flags on Update transactions
 - Warning: All qualifier codes replaced
- Interactive – Maintain Raw Data
 - Add Exceptional Event Qualifier Code
 - Save



Define Event

- Maintain Event Form: Enter the following:
 - Qualifier Code (required)
 - Begin Date (optional but recommended)
 - End Date (optional but recommended)
 - Event Description (required)
 - Text comments (optional)
 - URL of web page documenting event (optional)
- Event must be unique by Screening Group, Qualifier Code, and Event Description



Maintain Exceptional Events (National Air Data Group)

Define Event Associate Raw Data with Event

Screen Grp Name North Carolina PM25

Qualifier Code	Qualifier Description	Event Begin Date	Event End Date
RC	Chem. Spills & Indust. Accidents	20080401	20080430

Event Description Test event for R. Coats

Comment This is an example event created for the 2010 AQS conference.

Url <http://www.epa.gov>



Associate Event with Flagged Measurements

- Maintain Event
 - Query (or create) event (first tab)
 - Query affected monitors (second tab)
 - By default, all monitors with raw data with event flag in date range will be queried.
 - Can subset/select by monitor key fields
 - Can subset measurements affected by date range
 - Can Associate/Disassociate by Monitor or all retrieved data
 - Counts will be updated when action is saved

Associate Raw Data Tab



Maintain Exceptional Events (National Air Data Group)

Define Event | Associate Raw Data with Event

Event Description

Screen Grp Name:
 Qualifier Code:
 Qualifier Description:
 Event Begin Date:
 Event End Date:

State Code	County Code	Site ID	Parameter	POC
<input type="text" value="37"/>	<input type="text" value="147"/>	<input type="text" value="0006"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Monitor Key	Begin Date	End Date	# Associated	# Unassociated	Action
<input type="text" value="37-147-0006-88101-1"/>	<input type="text" value="20080411"/>	<input type="text" value="20080411"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="No Action"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Find %

Action	
Associate	
Disassociate	
No Action	



Associate Via Maintain Raw Form (only for very small sets)

- Query Monitor and date range
- Select flagged measurement
- In Event Description Block, click on LOV to select existing event, or create new event
- Can remove existing association by selecting “No Event”
- Click save (Stat/CR and Post not required)



Maintain - Raw Data (National Air Data Group)

Raw Data | Comments

State: 37 | County: 147 | Site: 0006 | Parameter: 88101 | POC: 1 | Begin Date: 20080411 | End Date: 20080411 | Standard Units: 105

Raw Data Mp ID	Date	Time	Stat Ind	Reported Sample Value	Standard Sample Value	EPA Ind	Action Ind	Exclusion Ind	Null Ind	Data Code	Description
1	20080411	00:00	P	3.56	3.5						

Find %

Event Description

CREATE EVENT

NO EVENT

Test event for R. Coats

Find OK Cancel

Qualifier Code	Qualifier Desc	Qualifier Type
RC	CHEM. SPILLS & INDUST. ACCIDENTS	REQEXC

Monitor Protocol	Method	Unit	Duration	Coll Frequency	Alt Mdl
118	105	7	3		

Event Description Association Date

Event Comment

Event URL



Review Flaged Data Status

- AQS report, AMP360 – Raw Data Qualifier Report
 - Report options to select specific qualifier types (Request Exclusion, Informational, Null Data Codes, QA Qualifiers, Comment Qualifiers, or all)
 - Report option to select specific qualifier code
 - Report option to select specific Exceptional Event Concurrence state (Concurred, Non-concurred, null – not yet reviewed)

Review Flagged Data Example



United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 13, 2010

Parameter: PM2.5 - Local Conditions (88101)

Standard Units: Micrograms/cubic meter (LC) (105)

Monitor Key / Site Address	Sample Date-Time	Sample Qualifier Value Code Description	Action Date	NAAQS Standard	Concurrence Ind Date
37-147-0006-88101-1 403 Government Circle	2008-04-06 00:00	AN Machine Malfunction	2008-07-05		
37-147-0006-88101-1 403 Government Circle	2008-04-09 00:00	AN Machine Malfunction	2008-07-05		
37-147-0006-88101-1 403 Government Circle	2008-04-11 00:00	3.5 RC Chem. Spills & Indust. Accidents	2009-03-01	PM25 24-hour 2006 PM25 Annual 2006	Y 2010-05-12 N 2010-05-12
	Event:	Test event for R. Coats	2010-05-12	Justification does not meet requirements	
	Comment/URL:	http://www.epa.gov			
Monitor Qualifier Counts:		RC Chem. Spills & Indust. Accidents		Count: 1	
		AN Machine Malfunction		Count: 2	



Report Options for Summary Reports

- AQS Reports contain an option to show summary data with or without exceptional events using the EDT_ID 0
 - 0 – No data has been flagged
- OR
- 1, 2, and 5
 - 1 – The summary excludes all flagged data
 - 2 – The summary does not exclude any data
 - 5 – The summary excludes regionally concurred flagged data



Standard Reports: Report Options

The screenshot shows the "Standard Report Criteria Selection (National Air Data Group) AMP480" application. The interface includes a tabbed menu with "Criteria Set", "Data Selection", "Sort Order", "Report Options", and "Retrieve Reports". The "Report Options" tab is active, displaying a list of settings:

SINGLE EVENT PROCESSING	EXCLUDE REGIONALLY CONCURRED E
WORKFILE DELIMITER	.
USER SITE METADATA	STREET ADDRESS
MERGE PDF FILES	YES
QUARTERLY DATA IN WORKFILE	NO

A light blue arrow points from the "EXCLUDE REGIONALLY CONCURRED E" dropdown menu to an "Option Values" dialog box. This dialog box contains a search field and a list of options:

- INCLUDE EVENTS
- EXCLUDE EVENTS
- EXCLUDE REGIONALLY CONCURRED EVENTS

Below the main settings, a list of report criteria is visible, with "Lead 3-Month 200" selected:

- Lead 3-Month 200
- Ozone 8-Hour 200
- PM10 24-hour 200
- SO2 1-hour 2010
- NO2 1-hour
- PM25 24-hour 201

The "Option Values" dialog box has "End", "OK", and "Cancel" buttons at the bottom.